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Re: Comments on Notice of Drafting for R.61-68 and R.61-69 as part of the 2010 Triennial Review

Upstate Forever, SC Coastal Conservation League, Southern Environmental Law Center, Conservation Voters of SC, American Rivers Southeast Region, Catawba Riverkeeper Foundation, Congaree Riverkeeper, Waccamaw Riverkeeper, Friends of Lake Keowee Society, SC Wildlife Federation, and Lake Hartwell Association appreciate the opportunity to participate in the Water Quality Standards Triennial Review process. Our eleven organizations represent over 24,500 individuals throughout South Carolina and collectively work to promote and protect water quality and quantity in all waters of the State.

We respectfully submit the following comments regarding South Carolina Regulations 61-68, *Water Classifications and Standards,* and 61-69, *Classified Waters,* in response to the Notice of Drafting issued on March 26th, 2010, and the revised Notice of Drafting issued on April 23, 2010.

Comments regarding R.61-68, *Water Classifications and Standards*:

1. Section C. 4. a. (1) and Section C. 5. A. (1): **The Department should clearly state that numeric criteria will be upheld during all flow periods**. The above referenced sections of the regulation should be clarified to state that waters of the State will be protected by the Water Quality Standards, regardless of flow conditions. The current regulation states "The numeric criteria of this regulation are not applicable to waters of the State when the flow rate is less than 7Q10...." In times of drought or in areas downstream of significant withdrawals, waters of the State may be below the 7Q10 flow. We believe that it is critical to uphold the numeric criteria for our waterbodies regardless of flow rates because pollutants typically become concentrated as volume decreases. The Department should clarify that these sections are intended to apply to permitted discharge effluent limits.
2. Section C. 4. b. (1): **The Department should include a definition of "30Q5" in Section B or define this value within the text of this section**.

3. Section D. 2. b.: **The Department should adopt EPA policy on when water quality may be lowered due to "important economic and social factors."** EPA's policy is that "this provision is intended to permit degradation of high-quality water bodies in only a few extraordinary cases where the benefits of the economic or social development unquestionably outweigh the costs of lowering water quality." See http://www.epa.gov/waterscience/standards/econworkbook/chaptr1.html

4. Section D. 2. b.: **The Department should remove the provision that purports to exempt a review of important social or economic benefits for a project that will degrade water quality if a discharge conforms to the applicable 208 Areawide Water Quality Management Plan**. **The Department should require an applicant to demonstrate compliance with the policy explained above.** The purpose of 208 Areawide Water Quality Management plans is to "develop and implement regional waste treatment management plans." These plans define when and where ***regional*** wastewater treatment is provided or expanded. The plans are not intended to address economic development or social development at a scale sufficient to evaluate the importance of a specific discharge to a waterbody.

5. Section E. 4. b.: **The Department should establish a process for addressing consistent violators.** The Department should provide that a wastewater utility that with three or more significant violations in any twelve month period will be required to complete a comprehensive review of its operation and submit a report with recommendations to the Department. The Department should have the authority to require the utility to implement some or all of the recommendations.

6. Section E. 7. e.: **The Department should clarify that human-caused changes to the physical condition of a waterbody cannot provide an exemption for compliance with numeric and narrative standards.** The Department could clarify this section by amending the following sentence to read: "Physical conditions related to the natural features of the water body, such as the lack of proper substrate, cover, flow, depth, pools, riffles, and the like, preclude attainment of aquatic life protection uses, ***if those physical conditions are not human caused;*** or…" (emphasis added to note suggested modification).

7. Section E. 11. b.: **The Department should reduce the lake size threshold for application of the nutrient standards from 40 acres to 20 acres or more.** Such a change would ensure that additional lakes are protected by these important standards.

8. **The Department should establish natural baseline conditions for waters of the state and amend the regulation to reference these conditions rather than dynamic conditions that may be caused or affected by human activities.** Throughout the regulation, the Department uses phrases such as "natural" or "ambient" conditions to refer to benchmarks for current or future discharges. As anthropogenic impacts on water quality and quantity continue, what is considered 'natural' or 'ambient' may be

subject to change, uncertainty, and interpretation. Therefore, we strongly recommend that the Department use historic records to establish a common baseline condition for waterbodies to ensure that anthropogenic shifts in 'natural' conditions do not cause weaker permitting limits.

Areas where these changes should be made include (but are not limited to) Section E. 12. a.; Section E. 14. d. (1); and Section G. 9. (h).

9. Section E. 14. c. (2): **The Department should replace the phrase "*practical quantitation limit*" with "*analytical detection limit*" for consistency and clarity.**

10. Section E. 14. c. (6): **The Department should remove the exemption from application of numeric turbidity standards for facilities that withdraw surface water from the same body into which its discharge is made.** The regulation does not specify a distance between intake and discharge locations, potentially allowing turbidity violations a significant distance downstream of the discharge. In addition, the exemption does not ensure that there has been no or minimal changes of turbidity from above the intake to downstream of the discharge. Finally, rather than removing the exemption in its entirety, the Department could amend the exemption such by clarifying that the discharged water does not contribute to a measurable increase of turbidity of the waterbody where the baseline is measured as measured above the intake and the changed condition is measured below both the facility's intake and discharge.

11. Section E. 14. c. (9): **The Department should expeditiously switch to use of *E. coli* for the protection of recreational uses in freshwaters**. *E. coli* predicts illness rates due to ingestion by swimmers and is also a specific indicator of sewage or fecal sources. The use of *E. coli* was recommended by EPA in 1986 because of its ability to accurately and reliably predict the occurrence of gastroenteritis after recreational exposure to polluted waterways.

    a. **As part of the transition to *E. coli*, the Department should establish a standard for all waterbodies that it is protective of frequent full body contact recreation.** The overriding goal of the Clean Water Act is for **all waters** to be fishable and swimmable. Establishing different standards based on the frequency of recreational use of a waterbody would result in a number of waterbodies with having levels of *E. coli* too high for recreation. In addition, the process to determine and designate the frequency of use of each waterbody in the State would be unnecessarily expensive and time consuming and would likely result in waterways being under-protected.

    b. **In establishing the *E. coli* standard, the Department should use an illness rate of 0.5% in order to ensure that public health is protected to the greatest extent possible**. A lower illness rate would ensure better protection of public health. In no event should the standard use a rate higher than the EPA approved rate of 0.8%.

c. **The Department should establish geometric mean and single sample maximum standards for *E. coli* for the State that are uniform throughout the year and are based on critical conditions during the warmer months**. Seasonal variation would result in a serious risk to public health and an inability to support recreational uses during certain times of the year. Rather, recreational uses should be fully protected throughout the year.

d. **The Department should phase out the use of fecal coliform-based standards as quickly as practicable**. We would support either an immediate change to the new *E. coli* standard or a gradual shift to the new standard during which time the State would have both a fecal coliform and *E. coli* standard. However, the Department should have an ultimate goal of phasing out the use of fecal coliform and relying only *E. coli* based standards within 2 years. Of the 30 states that use *E. coli* based standards, only seven (7) still continue to use fecal coliform in addition to *E. coli*, and several of these states are transitioning to *E. coli* only.

12. Section F. 1. d.: **With the exception of high quality waters, the Department should establish physical and biological reference conditions on all waters throughout the state and apply these standards to future permitting requirements.** It is expensive and ineffective to identify a reference reach for each new permit application; studying reference reaches ahead of time would create uniformity throughout the permitting process and would greatly reduce the burden on applicants and the Department. Furthermore, the various reference reaches used for projects will likely change due to anthropogenic influences, resulting in each new permittee being held to a different standard. If reference reaches are established, recorded, and only modified when appropriate, permittees would be held to the same uniform standards and would be more likely to fully comply with the water quality standard. However, due to the sensitive nature and unique characteristics of high quality waterways throughout the State, projects located on or along ONRW, ORW, Shellfish Harvesting Waters, and Trout Waters should have project-specific reference reaches established.

13. Section H. 9. (c).: **The Department should prohibit the discharge of man-made radionuclides, priority pollutant volatile organic compounds, pesticides, herbicides, polychlorinated biphenyls, any other synthetic organic compounds not specified above, treated wastes, thermal wastes, deleterious substances, colored wastes or other wastes or constituents thereof in ground water classified as GB**. Groundwater of this classification can be used for drinking water and therefore should not be allowed to contain any of these pollutants.

14. Section H. 10. a.: **The Department should prohibit the discharge of treated wastes, toxic wastes, deleterious substances, or other constituents thereof to any groundwater.** Groundwater is difficult to track and could undetectably feed surface

streams. Therefore, the introduction of these pollutants should not be allowed in any groundwater in the State.

15. Appendix: Priority Toxic Pollutants, Footnotes, dd: **The Department should establish a numerical standard for methylmercury sufficient to prevent the bioaccumulation of methylmercury to levels that are considered harmful to aquatic life or to human health when fish or other aquatic life is ingested.** As stated in the text, when a substantial portion of the mercury in the water column is methylmercury, the mercury criterion will probably be under protective. The Department should correct this deficiency as described above.
16. Appendix: Non Priority Pollutants, 8: **The Department should establish human health standards for chlorine established by the EPA under the Safe Drinking Water Act, as stated in footnote G.**
17. Appendix: Non Priority Pollutants, 54: **The Department should clarify the regulation by providing a list of tainting substances.**

General Comments:

18. **The Department should establish in-stream nutrient standards in order to more fully protect surface waters**. In *The State of South Carolina's Adoption Plan for Numeric Nutrient Water Quality Criteria* (see http://www.scdhec.gov/environment/water/docs/nutrient.pdf), the Department establishes a schedule for adopting numeric nutrient criteria for estuaries and rivers and streams by mid 2007. The Department failed to meet this schedule for adoption and, therefore, should include nutrient standards for estuaries and rivers and streams in the 2010 triennial review. As stated in the *Adoption Plan*, the Department has traditionally collected phosphorus, nitrogen, and turbidity data as part of its stream monitoring program. This has provided the Department with well over 120,000 observations that should be used to expeditiously establish nutrient standards for all waters of the state. Action by the Department through the 2010 Triennial Review is the quickest and most effective way to establish nutrient standards within South Carolina and avoid EPA intervention in promulgating nutrient standards as recently seen in Florida.
19. **The Department should establish and enforce numeric standards for pharmaceuticals, personal care products, and other emerging contaminants in all waters of the State. Standards should also be established for the discharge of these chemicals because various wastewater treatment facilities are producing effluent that varies greatly in concentration of these chemicals.** There is increasing evidence of the harmful effects of pharmaceuticals and other emerging contaminants in wastewater and drinking water. The Department, therefore, should take proactive efforts to protect our health and welfare from these chemicals by establishing a strategy to evaluate and establish standards for emerging contaminants. Massachusetts has established an Emerging Contaminant Workgroup in order to

"identify and assess public health and environmental problems associated with presently unregulated or contaminants that are not adequately regulated" and providing a process to decide if and how to address these contaminants, and submitting recommendations to the Massachusetts Department of Environmental Protection for managing these contaminants. SC DHEC should use the Massachusetts or similar model to foster information exchange and bring together a wide range of expertise in order to evaluate and establish standards for emerging contaminants in South Carolina. See http://www.mass.gov/dep/toxics/stypes/emercfs.htm

20. **The Department should develop a narrative standard for stream flow that recognizes sufficient flow as essential to protecting designated uses and that the amount of water needed would vary depending on the designated use, physical, chemical and biological characteristics of the water body, and necessary flow variations within and across years**. Sufficient water flow is fundamental to achieving the goals of the Clean Water Act and to protect and restore the chemical, physical and biological quality of our waters. Aquatic life, primary and secondary recreation, drinking water, industrial and agricultural water use, and other designated uses depend on adequate flow in streams and therefore warrant a narrative flow standard in R.61-68. Since water flow is essential for meeting designated uses and avoiding degradation, the narrative standard should also state that out of kind mitigation, such as land protection or funding, cannot be provided in lieu of a sufficient flow.

Comments regarding R.61-69, *Classified Waters*:

1. **The Department should reclassify Reedy Cove Creek in Pickens County to ORW.** McCall RA Camp converted their NPDES wastewater system to a septic system in April of 2008. There are no other direct discharges along the creek and all surrounding streams are classified as ORW. Reedy Cove Creek is upstream of TPGT waters. Managers at McCall RA Camp support the reclassification.
2. **The Department should designate Lake Jocassee in Oconee County as a No Discharge Zone or "NDZ."** Downstream Lakes Keowee and Hartwell are designated as such. In order to more fully protect drinking water sources and recreational uses, Lake Jocassee should also be designated as "NDZ."
3. **The Department should reclassify those waterbodies that the SC Department of Natural Resources manages as Trout Put and Take waterbodies (TPT) to Trout Put and Take.** Currently, the Department has no waterbodies classified as TPT, yet many Freshwaters are stocked and managed for trout fishing. These waterbodies should be identified and classified accordingly so that existing uses may be afforded appropriate protection under the specific standards and antidegradation policies of the regulation. These reclassifications include (but are not limited to) the following rivers:
    a. **The South Saluda River from Highway 8 to the confluence with the North Saluda River.**

b. **The North Saluda River from S.C. 42 to the confluence with the South Saluda River.**

c. **The Middle Saluda River from Oil Camp Creek to the confluence with the South Saluda River.**

4. **The Department should designate the Charleston Harbor as a No Discharge Zone or "NDZ".** Industrial dischargers along the Ashley and Cooper Rivers will be reducing discharges as necessary to protect water quality, however, increased boating could negatively impact water quality under the current state and federal rules. The Department should take preliminary steps to evaluate and designate Charleston Harbor as a No Discharge Zone.

Thank you for your consideration of these comments. We look forward to working with you in making the appropriate changes to better protect the water quality of the State.

Sincerely,

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